



1600

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/937,862B

DATE: 10/09/2003

TIME: 12:20:10

Input Set : A:\W124859.txt  
 Output Set: N:\CRF4\10092003\I937862B.raw

4 <110> APPLICANT: Oberste, M. Steven  
 5 Maher, Kajja  
 6 Kilpatrick, David R.  
 7 Pallansch, Mark A.  
 10 <120> TITLE OF INVENTION: TYPING OF HUMAN ENTEROVIRUSES  
 13 <130> FILE REFERENCE: 14114.0353U2  
 15 <140> CURRENT APPLICATION NUMBER: 09/937,862B  
 16 <141> CURRENT FILING DATE: 2001-09-28  
 18 <150> PRIOR APPLICATION NUMBER: PCT/US00/07828  
 19 <151> PRIOR FILING DATE: 2000-03-24  
 21 <150> PRIOR APPLICATION NUMBER: 60/127,464  
 22 <151> PRIOR FILING DATE: 1999-03-31  
 24 <160> NUMBER OF SEQ ID NOS: 89  
 26 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 28 <210> SEQ ID NO: 1  
 29 <211> LENGTH: 20  
 30 <212> TYPE: DNA  
 31 <213> ORGANISM: Artificial Sequence  
 33 <220> FEATURE:  
 34 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 35 synthetic construct  
 38 <400> SEQUENCE: 1  
 39 gcrtgcaatg aytctcgat 20  
 41 <210> SEQ ID NO: 2  
 42 <211> LENGTH: 18  
 43 <212> TYPE: DNA  
 44 <213> ORGANISM: Artificial Sequence  
 46 <220> FEATURE:  
 47 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 48 synthetic construct  
 W--> 51 <221> NAME/KEY: misc\_feature  
 52 <222> LOCATION: (1)...(18)  
 53 <223> OTHER INFORMATION: n = a, t, c or g  
 W--> 55 <400> 2  
 W--> 56 ngcnccdgat tgntgsc 18  
 58 <210> SEQ ID NO: 3  
 59 <211> LENGTH: 20  
 60 <212> TYPE: DNA  
 61 <213> ORGANISM: Artificial Sequence  
 63 <220> FEATURE:  
 64 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 65 synthetic construct  
 W--> 68 <221> NAME/KEY: misc\_feature

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69 <222> LOCATION: (1)...(20)  
70 <223> OTHER INFORMATION: n = a, t, c or g  
W--> 72 <400> 3  
W--> 73 **gcncncngayt gntgnccraa** 20  
75 <210> SEQ ID NO: 4  
76 <211> LENGTH: 20  
77 <212> TYPE: DNA  
78 <213> ORGANISM: Artificial Sequence  
80 <220> FEATURE:  
81 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
82 synthetic construct  
W--> 85 <221> NAME/KEY: **misc\_feature**  
86 <222> LOCATION: (1)...(20)  
87 <223> OTHER INFORMATION: n = a, t, c or g  
W--> 89 <400> 4  
W--> 90 **atgtaygtnc cnccnngngg** 20  
92 <210> SEQ ID NO: 5  
93 <211> LENGTH: 20  
94 <212> TYPE: DNA  
95 <213> ORGANISM: Artificial Sequence  
97 <220> FEATURE:  
98 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
99 synthetic construct  
W--> 102 <221> NAME/KEY: **misc\_feature**  
103 <222> LOCATION: (1)...(20)  
104 <223> OTHER INFORMATION: n = a, t, c or g  
W--> 106 <400> 5  
W--> 107 **ggngcrttnc cytcngtcca** 20  
109 <210> SEQ ID NO: 6  
110 <211> LENGTH: 20  
111 <212> TYPE: DNA  
112 <213> ORGANISM: Artificial Sequence  
114 <220> FEATURE:  
115 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
116 synthetic construct  
W--> 119 <221> NAME/KEY: **misc\_feature**  
120 <222> LOCATION: (1)...(20)  
121 <223> OTHER INFORMATION: n = a, t, c or g  
W--> 123 <400> 6  
W--> 124 **acrtgnncnng tytgcatngt** 20  
126 <210> SEQ ID NO: 7  
127 <211> LENGTH: 18  
128 <212> TYPE: DNA  
129 <213> ORGANISM: Artificial Sequence  
131 <220> FEATURE:  
132 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
133 synthetic construct  
W--> 136 <221> NAME/KEY: **misc\_feature**  
137 <222> LOCATION: (1)...(18)

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138 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 140 <400> 7**  
**W--> 141 awnttytayg ayggntgg** 18  
 143 <210> SEQ ID NO: 8  
 144 <211> LENGTH: 20  
 145 <212> TYPE: DNA  
 146 <213> ORGANISM: Artificial Sequence  
 148 <220> FEATURE:  
 149 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 150 synthetic construct  
**W--> 153 <221> NAME/KEY: misc\_feature**  
 154 <222> LOCATION: (1)...(20)  
 155 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 157 <400> 8**  
**W--> 158 tananngtnc ccatrtrttt** 20  
 160 <210> SEQ ID NO: 9  
 161 <211> LENGTH: 20  
 162 <212> TYPE: DNA  
 163 <213> ORGANISM: Artificial Sequence  
 165 <220> FEATURE:  
 166 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 167 synthetic construct  
**W--> 170 <221> NAME/KEY: misc\_feature**  
 171 <222> LOCATION: (1)...(20)  
 172 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 174 <400> 9**  
**W--> 175 atgtayrtnc cnmcngngc** 20  
 177 <210> SEQ ID NO: 10  
 178 <211> LENGTH: 20  
 179 <212> TYPE: DNA  
 180 <213> ORGANISM: Artificial Sequence  
 182 <220> FEATURE:  
 183 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 184 synthetic construct  
**W--> 187 <221> NAME/KEY: misc\_feature**  
 188 <222> LOCATION: (1)...(20)  
 189 <223> OTHER INFORMATION: n = a, t, c or g  
**W--> 191 <400> 10**  
**W--> 192 gngngnggrt cngtnakytt** 20  
 194 <210> SEQ ID NO: 11  
 195 <211> LENGTH: 20  
 196 <212> TYPE: DNA  
 197 <213> ORGANISM: Artificial Sequence  
 199 <220> FEATURE:  
 200 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 201 synthetic construct  
**W--> 204 <221> NAME/KEY: misc\_feature**  
 205 <222> LOCATION: (1)...(20)  
 206 <223> OTHER INFORMATION: n = a, t, c or g

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Input Set : A:\W124859.txt

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W--> 208 <400> 11

W--> 209 **gangaraayc tnatngarac** 20

211 <210> SEQ ID NO: 12

212 <211> LENGTH: 19

213 <212> TYPE: DNA

214 <213> ORGANISM: Artificial Sequence

216 <220> FEATURE:

217 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
synthetic construct

W--> 221 <221> NAME/KEY: **misc\_feature**

222 <222> LOCATION: (1)...(19)

223 <223> OTHER INFORMATION: n = a, t, c or g

W--> 225 <400> 12

W--> 226 **cccatnakrt cnatrtccc** 19

228 <210> SEQ ID NO: 13

229 <211> LENGTH: 20

230 <212> TYPE: DNA

231 <213> ORGANISM: Artificial Sequence

233 <220> FEATURE:

234 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
synthetic construct

W--> 238 <221> NAME/KEY: **misc\_feature**

239 <222> LOCATION: (1)...(20)

240 <223> OTHER INFORMATION: n = a, t, c or g

W--> 242 <400> 13

W--> 243 **gtrctyacna nnagrtcyct** 20

245 <210> SEQ ID NO: 14

246 <211> LENGTH: 19

247 <212> TYPE: DNA

248 <213> ORGANISM: Artificial Sequence

250 <220> FEATURE:

251 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
synthetic construct

W--> 255 <221> NAME/KEY: **misc\_feature**

256 <222> LOCATION: (1)...(19)

257 <223> OTHER INFORMATION: n = a, t, c or g

W--> 259 <400> 14

260 tsaarytgca aargacac 19

262 <210> SEQ ID NO: 15

263 <211> LENGTH: 18

264 <212> TYPE: DNA

265 <213> ORGANISM: Artificial Sequence

267 <220> FEATURE:

268 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
synthetic construct

W--> 272 <221> NAME/KEY: **misc\_feature**

273 <222> LOCATION: (1)...(18)

274 <223> OTHER INFORMATION: n = a, t, c or g

W--> 276 <400> 15

RAW SEQUENCE LISTING  
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Input Set : A:\W124859.txt  
 Output Set: N:\CRF4\10092003\I937862B.raw

277 stgycagat ttcagtgt 18  
 279 <210> SEQ ID NO: 16  
 280 <211> LENGTH: 20  
 281 <212> TYPE: DNA  
 282 <213> ORGANISM: Artificial Sequence  
 284 <220> FEATURE:  
 285 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 286 synthetic construct  
 W--> 289 <221> NAME/KEY: **misc\_feature**  
 290 <222> LOCATION: (1)...(20)  
 291 <223> OTHER INFORMATION: n = a, t, c or g  
 W--> 293 <400> 16  
 W--> 294 ggnacncayr tnathggga 20  
 296 <210> SEQ ID NO: 17  
 297 <211> LENGTH: 20  
 298 <212> TYPE: DNA  
 299 <213> ORGANISM: Artificial Sequence  
 301 <220> FEATURE:  
 302 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 303 synthetic construct  
 W--> 306 <221> NAME/KEY: **misc\_feature**  
 307 <222> LOCATION: (1)...(20)  
 308 <223> OTHER INFORMATION: n = a, t, c or g  
 W--> 310 <400> 17  
 W--> 311 gcntrttnt grtgncraa 20  
 313 <210> SEQ ID NO: 18  
 314 <211> LENGTH: 20  
 315 <212> TYPE: DNA  
 316 <213> ORGANISM: Artificial Sequence  
 318 <220> FEATURE:  
 319 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 320 synthetic construct  
 W--> 323 <221> NAME/KEY: **misc\_feature**  
 324 <222> LOCATION: (1)...(20)  
 325 <223> OTHER INFORMATION: n = a, t, c or g  
 W--> 327 <400> 18  
 W--> 328 ggnacncayr tnrtntggga 20  
 330 <210> SEQ ID NO: 19  
 331 <211> LENGTH: 20  
 332 <212> TYPE: DNA  
 333 <213> ORGANISM: Artificial Sequence  
 335 <220> FEATURE:  
 336 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =  
 337 synthetic construct  
 W--> 340 <221> NAME/KEY: **misc\_feature**  
 341 <222> LOCATION: (1)...(20)  
 342 <223> OTHER INFORMATION: n = a, t, c or g  
 W--> 344 <400> 19  
 W--> 345 acngcngyng aracnggnca 20

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/937,862B

DATE: 10/09/2003  
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Input Set : A:\W124859.txt  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; N Pos. 1,4,13  
Seq#:3; N Pos. 3,6,12,15  
Seq#:4; N Pos. 9,12,15,18  
Seq#:5; N Pos. 3,9,15  
Seq#:6; N Pos. 6,8,9,18  
Seq#:7; N Pos. 3,15  
Seq#:8; N Pos. 3,5,6,9  
Seq#:9; N Pos. 9,12,15,18  
Seq#:10; N Pos. 3,6,12,15  
Seq#:11; N Pos. 3,12,15  
Seq#:12; N Pos. 6,12  
Seq#:13; N Pos. 9,11,12  
Seq#:16; N Pos. 3,6,12  
Seq#:17; N Pos. 4,9,15  
Seq#:18; N Pos. 3,6,12,15  
Seq#:19; N Pos. 3,6,9,15,18  
Seq#:20; N Pos. 3,6,9,15,18  
Seq#:21; N Pos. 6,9,15,18  
Seq#:22; N Pos. 2,5,8,11  
Seq#:81; Xaa Pos. 3,5  
Seq#:82; Xaa Pos. 3  
Seq#:83; Xaa Pos. 3  
Seq#:84; Xaa Pos. 7  
Seq#:86; Xaa Pos. 2,3,7

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Input Set : A:\W124859.txt  
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L:51 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:55 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2  
L:56 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0  
L:68 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:72 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3  
L:73 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0  
L:85 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:89 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:4  
L:90 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0  
L:102 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:106 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:5  
L:107 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0  
L:119 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:123 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:6  
L:124 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0  
L:136 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:140 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7  
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0  
L:153 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:157 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:8  
L:158 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0  
L:170 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:174 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9  
L:175 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0  
L:187 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:191 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10  
L:192 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0  
L:204 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:208 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:11  
L:209 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0  
L:221 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:225 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:12  
L:226 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0  
L:238 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:242 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0  
L:255 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:259 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:14  
L:272 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:276 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15  
L:289 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:293 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16  
L:294 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0  
L:306 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:310 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17  
L:311 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0  
L:323 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:327 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18

## VERIFICATION SUMMARY

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L:328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0  
L:340 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:344 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:19  
L:345 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0  
L:357 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:361 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:20  
L:362 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0  
L:374 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:378 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:21  
L:379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0  
L:391 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:395 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:22  
L:396 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0  
L:1972 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1976 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:81  
L:1977 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:0  
L:1990 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1994 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:82  
L:1995 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:0  
L:2008 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2012 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:83  
L:2013 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:0  
L:2026 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2030 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:84  
L:2031 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:0  
L:2058 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:2062 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:86  
L:2063 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:0